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Suicide prevention in the context of substance use: Justice-involved individuals

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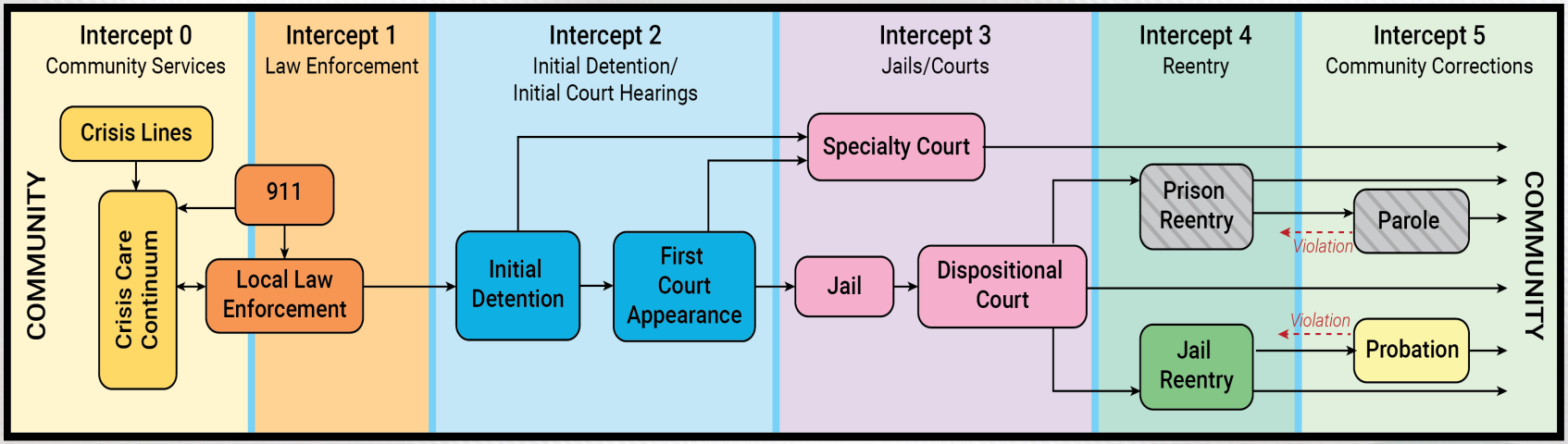
Conflicts of interest and Teams

The SPIRIT Trial (U01 MH106660 and U01 MH106660-S1)

- PIs: J. Johnson & **Lauren Weinstock**
- Collaborators: Sarah Arias, Greg Brown, Louis Cerbo, Holly Fitting, Richard Jones, Sheryl Kubiak, Christopher Matkovic, Ted Miller, Van Miller, Julie Rexroth, Barbara Stanley, Michael Stein, Julie Rexroth, Shirley Yen, Maji Debena
- Community partners: Rhode Island Dept of Corrections, Genesee County Jail, the Providence Center, Genesee Health System
- Funding agencies: NIMH, NIJ, OBSSR

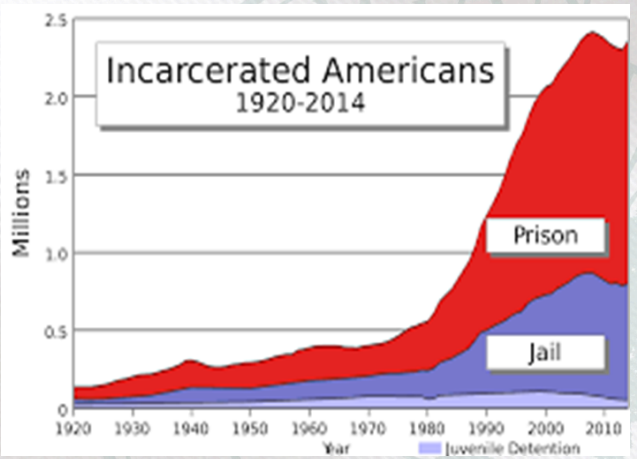
I have no conflicts of interest

U.S. Criminal Justice System



> 15 million in Intercepts 2-6 in U.S. per year (not counting police contacts)

- Probation
- Jail
- Prison
- Parole



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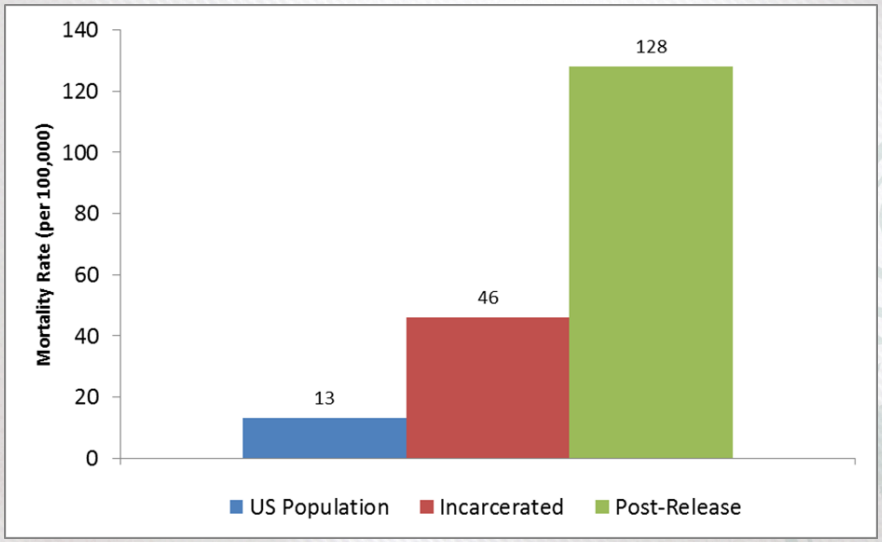
Justice system and public health

- CJ touches 15 million people per year in U.S.
- 1 in 34 U. S. adults has current CJ involvement, including 4.7 million on supervision under probation or parole
- U.S. CJ system is a catchment area for individuals at high health risk
  - 10 times as many individuals with severe mental illness are incarcerated as are in state hospitals
  - ~20% of people with SU disorders are justice-involved
  - Most of incarcerated are back in the community quickly; communities take on costs of their untreated health problems
  - 3 largest MH treatment providers in the country are jails (LA County, Cook County, Rikers)

Jails and suicide risk

- > 10 million jail admissions (~3-7 days) per year
  - 2/3 have lifetime mental health disorders
  - 3/4 have lifetime substance use disorders
  - often arrested at moments of crisis
- High suicide mortality following jail release



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Multiple suicide risk factors

Health Factors

- Mental health conditions
  - Depression
  - Bipolar (manic-depressive) disorder
  - Schizophrenia
  - Borderline or antisocial personality disorder
  - Conduct disorder
  - Psychotic disorders, or psychotic symptoms in the context of any disorder
  - Anxiety disorders
- Substance abuse disorders
- Serious or chronic health condition and/or pain

Environmental Factors

- Stressful Life Events which may include a death, divorce, or job loss
- Prolonged Stress Factors which may include harassment, bullying, relationship problems, and unemployment
- Access to Lethal Means including firearms and drugs
- Exposure to another person's suicide, or to graphic or sensationalized accounts of suicide

Historical Factors

- Previous Suicide Attempts
- Family History of Suicide Attempts

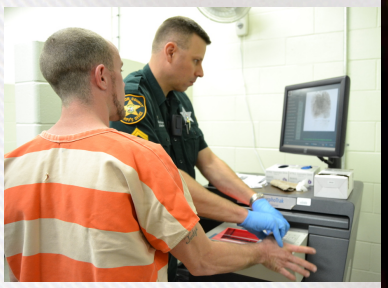
Source: AFSP
https://afsp.org/about-suicide/risk-factors-and-warning-signs//

Jails and suicide risk

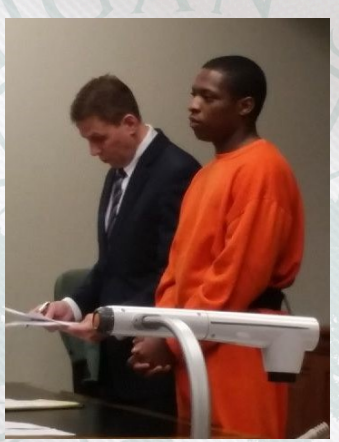
- **10% of suicides** with known causes occur following a recent criminal or legal stressor
- If brief suicide prevention interventions are as effective in jails as they are in the ED, implementing them in jails could **prevent 5-9% of all U.S. suicides**.

What is usual care in jails?

- Volume of at-risk individuals moving through pretrial jail detention presents public health opportunity and a logistical challenge
- Median LOS is < 1 week
- Individuals are often psychotic, manic, or intoxicated/high when admitted, making assessment challenging
- Jails do their best to screen and triage with limited time and limited resources
- A midsize jail may have 1 full-time social worker and 1 day/week of a psychiatrist for 13,000 admissions per year
- Usual care







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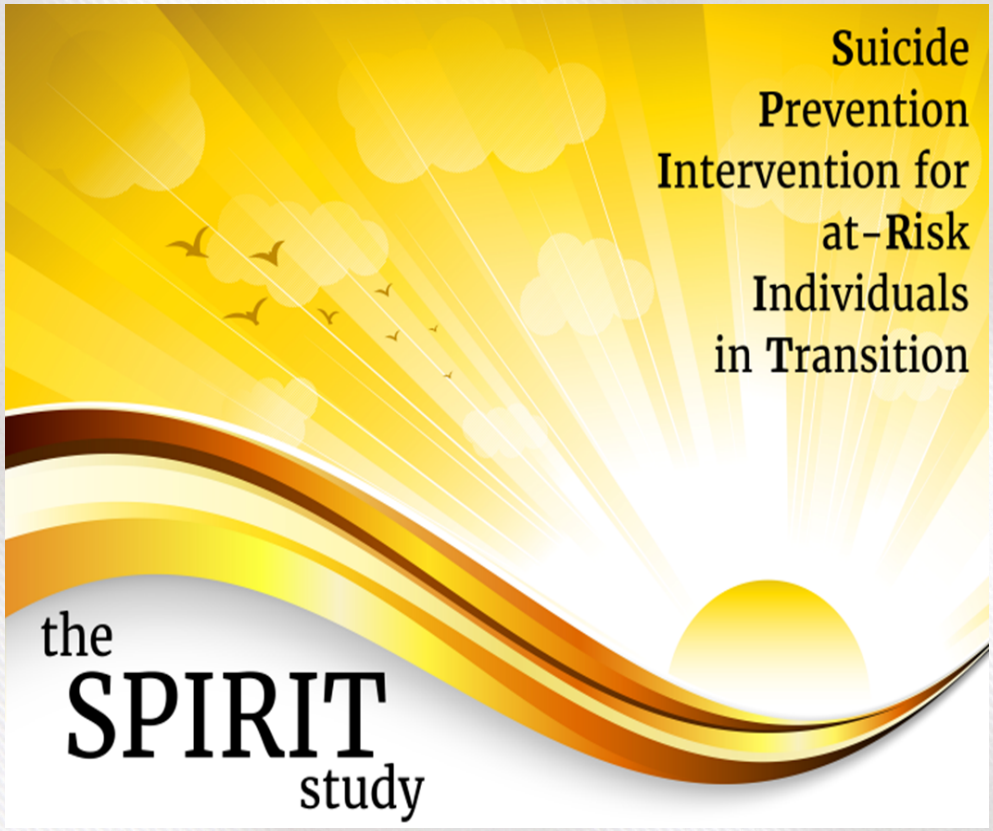
Many systems serving those most at risk are low-

(or are not treatment systems at all)

They are not resourced for coordinating care transitions
Many people fall out of care

The SPIRIT Study



- First RCT of any intervention for suicide risk reduction following release from jail
- Purpose is to reduce suicide **IN THE COMMUNITY**
- If SPI is as effective in jail detention as it is in the Ed, implementing SPI in jail detention could prevent 5-9% of all U.S. suicides

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SPIRIT rationale and design

- Jail detention as a critical moment to engage and intervene; individuals return to high risk environments
- Considers challenges in coordination of care for mental health and substance use between jail and community
  - Uses community mental health center clinicians as study counselors
- Enrolled 800 high-risk individuals for suicide from jails in RI and MI
- Randomization to Safety Planning Intervention (SPI) plus telephone follow-up (Stanley & Brown, 2008) or to Standard of Care (SoC)
- Assesses suicide behaviors and related events (e.g., ED visits, hospitalizations) through 12 months post-release
- Study designed with ultimate implementation in mind
  - Counselors who deliver the intervention are those already employed in community agencies contracted to deliver post-release services
  - Evaluates cost and cost-effectiveness

Baseline Descriptive Data: The Needs are Tremendous

	n (%)	M (SD)
Total sample randomized by 11/15/18	800 (100)	
Sex		
Female	213 (27)	
Male	587 (73)	
Age (years)		32.9 (10.4)
Ethnicity		
Not Hispanic or Latino	680 (85)	
Hispanic or Latino	116 (15)	
Race		
White	418 (52)	
Black or African American	193 (24)	
American Indian or Alaska Native	91 (11)	
Asian	5 (1)	
Some other race	93 (12)	
Education (years completed)		11.9 (1.9)
Veteran status (yes)	42 (5)	
Total times incarcerated		7.8 (11.1)
Suicide attempt (past 30 days)	397 (50)	
Suicide attempt (lifetime)	679 (85)	
Any suicide behavior (lifetime)	728 (91)	
Major depressive episode (lifetime)*	466 (84)	
(Hypo)manic episode (lifetime)*	218 (39)	
Psychotic symptoms (lifetime)*	252 (46)	
Psychiatric hospitalization (lifetime)	546 (68)	
Residential treatment (lifetime)	449 (56)	
Any outpatient treatment (past year)	584 (73)	

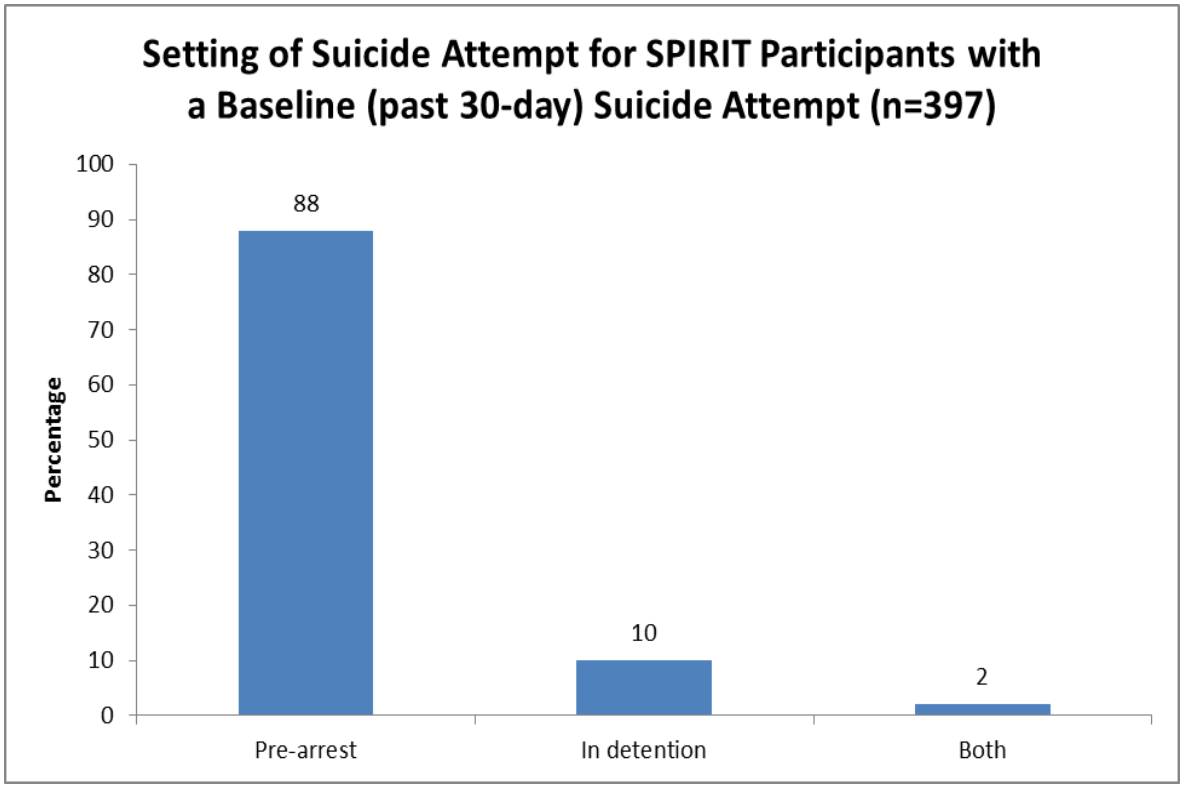
** MINI diagnostic data not available for full sample at this time. % based on n=552.*

Columbia Suicide Severity Rating Scale

Gold-standard assessment

Suicide attempt = any action taken with non-zero intent to die

Baseline Descriptive Data: Setting of Suicide Attempts Reported at Study Entry

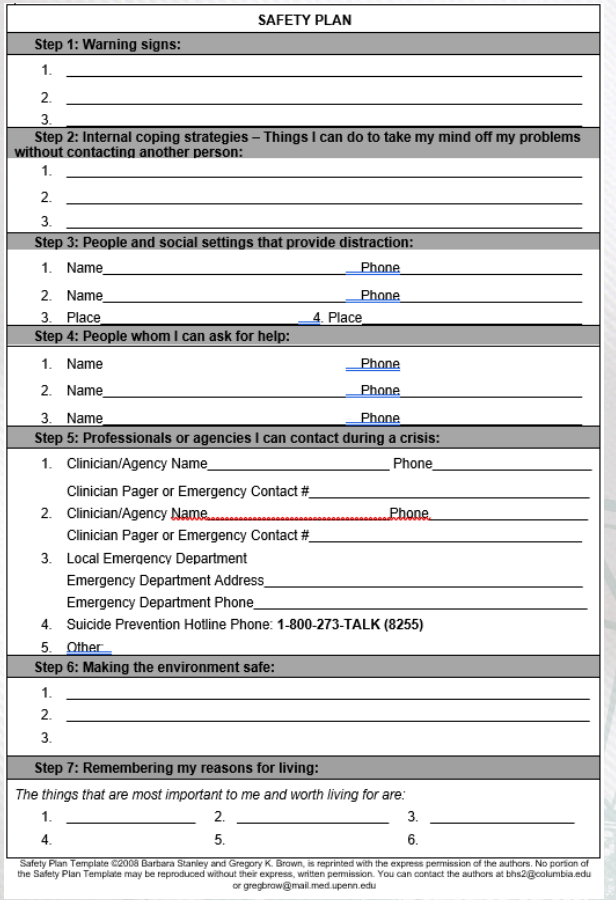


Columbia Suicide Severity Rating Scale definition of suicide attempt:
Any action taken with non-zero intent to die

Stanley and Brown's Safety Planning

Intervention

1. Warning signs
2. Internal coping strategies
3. People and social settings that provide distraction
4. People whom I can ask for help
5. Professionals or agencies I can contact during a crisis
6. Making the environment safe
7. Remembering my reasons for living



SAFETY PLAN

Step 1: Warning signs:

1. _____
2. _____
3. _____

Step 2: Internal coping strategies – Things I can do to take my mind off my problems without contacting another person:

1. _____
2. _____
3. _____

Step 3: People and social settings that provide distraction:

1. Name_____ Phone_____
2. Name_____ Phone_____
3. Place_____ 4. Place_____

Step 4: People whom I can ask for help:

1. Name Phone
2. Name_____ Phone_____
3. Name_____ Phone_____

Step 5: Professionals or agencies I can contact during a crisis:

1. Clinician/Agency Name_____ Phone_____
   Clinician Pager or Emergency Contact #_____
2. Clinician/Agency Name_____ Phone_____
   Clinician Pager or Emergency Contact #_____
3. Local Emergency Department
   Emergency Department Address_____
   Emergency Department Phone_____
4. Suicide Prevention Hotline Phone: **1-800-273-TALK (8255)**
5. Other:

Step 6: Making the environment safe:

1. _____
2. _____
3.

Step 7: Remembering my reasons for living:

The things that are most important to me and worth living for are:

1. _____ 2. _____ 3. _____
4. 5. 6.

Some initial findings

- We recruited 800 people with C-SSRS 4+ or suicide attempt in the past 30 days from 2 midsize jails in 30 months
  - ~40% lifetime mania, ~40% lifetime psychosis
- Follow-up
  - ~2500 follow-up interviews
  - 90% with 1+ follow-up assessments completed in the 12 months post-release
  - Medical records request and review
- Study intervention
  - The in-jail SPI+ session was completed for 390 of the 402 randomized to SPI (97%)
  - Participants completed 3.4 of the 5 planned SPI+ sessions, despite instability of life following jail release
- Sample risk
  - 16 deaths (1-2 from suicide) so far; 2.5% annual mortality rate so far for a sample with mean age ~35
  - 1150+ NIH-defined expected suicide related AEs/SAEs to date

Some initial findings

29% of participants in the control condition attempted suicide in the 16 weeks after release

41% made an attempt in the year after release

- Value of even the enhanced standard care control
  - Resource guide
  - End of Study responses
- Even a little bit can do a lot in this population

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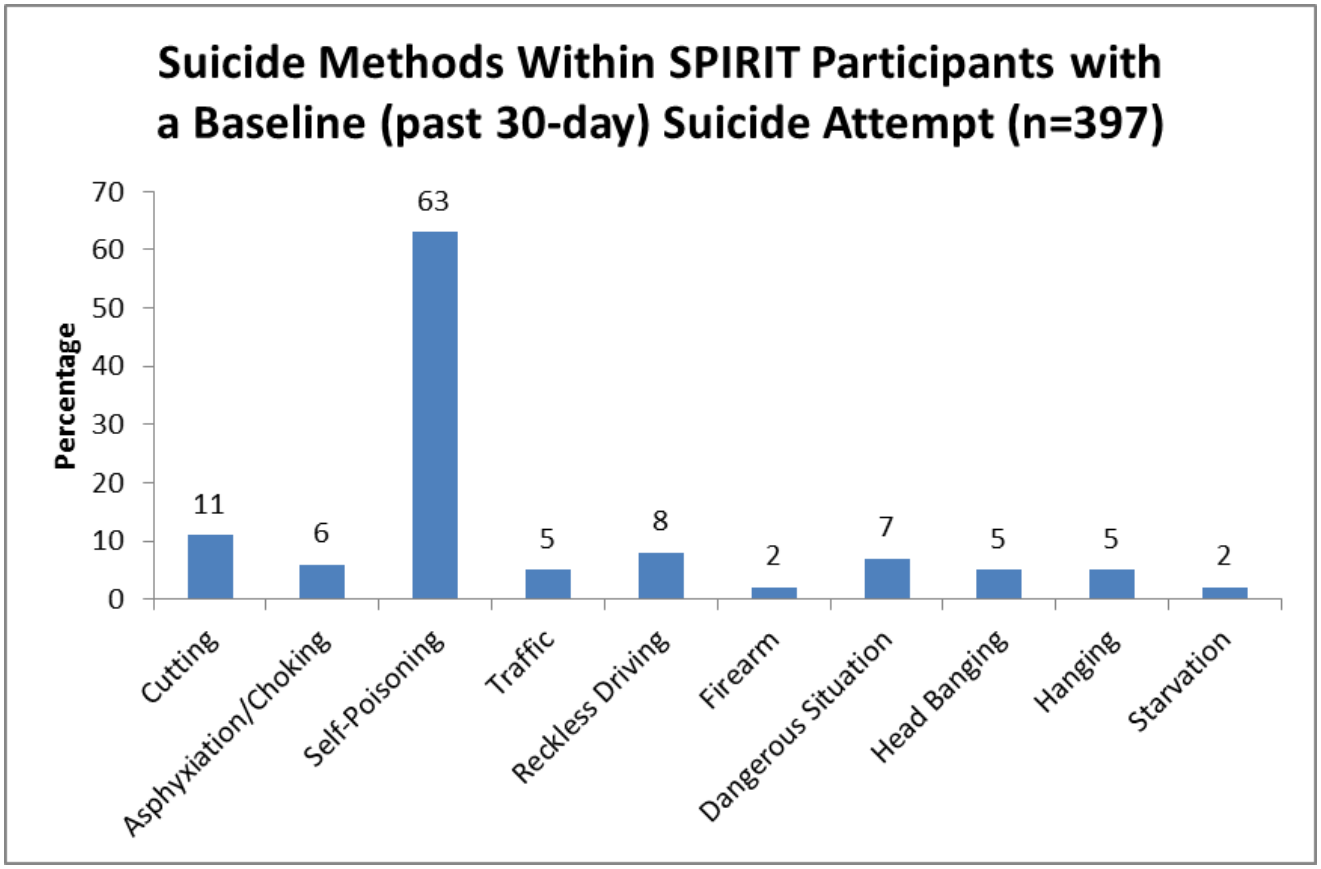
Previous research related to substance use and suicidality

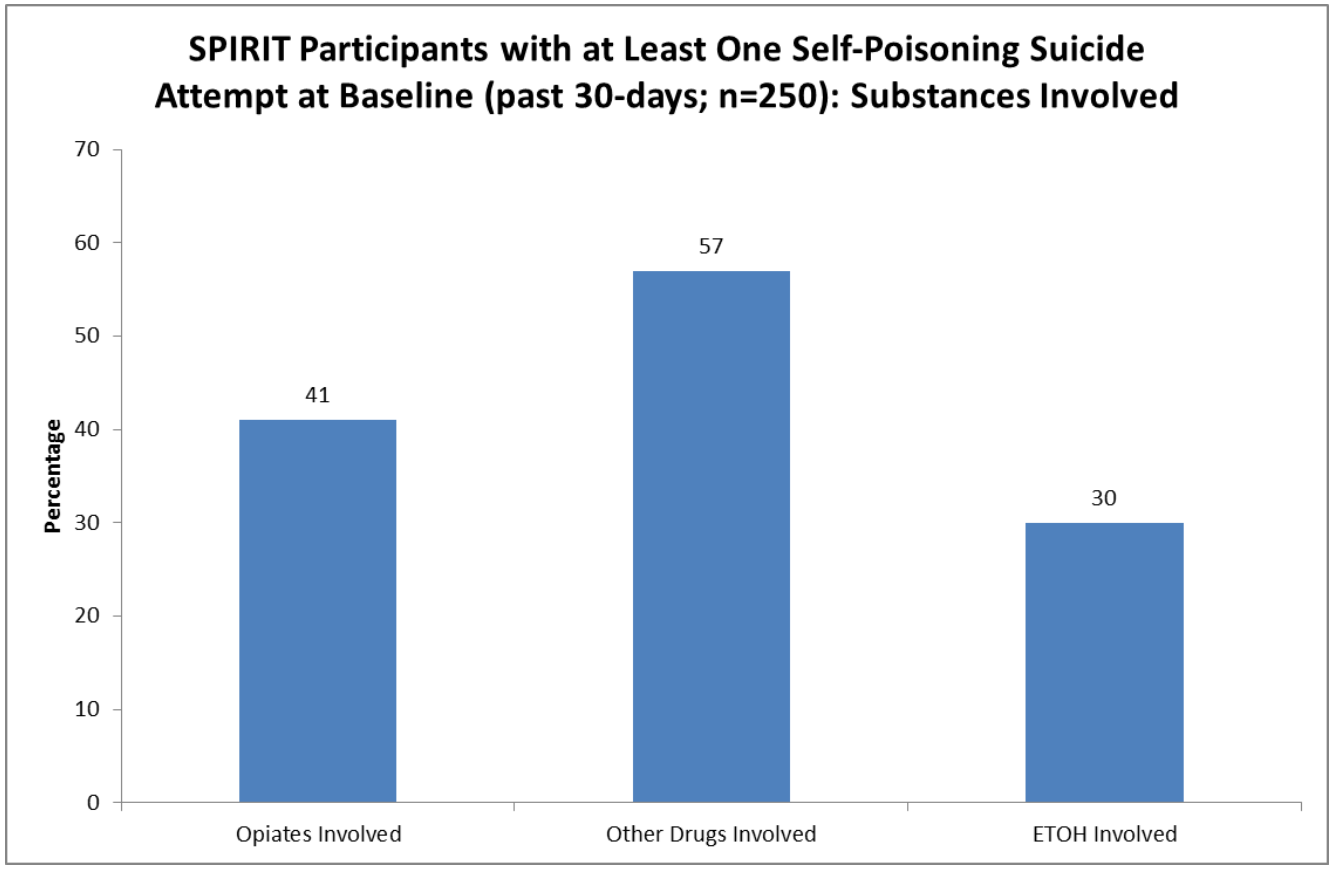
- There are ~64,000 opioid overdose deaths in the U.S. annually
- There may be as many as 2 million nonfatal opioid overdoses per year
- Overdose mortality increases 10x for those with non-fatal overdose
- There is a growing recognition that a substantive proportion of opioid overdoses (both fatal and non-fatal) may better represent undetected suicide attempts.
- Individuals with an opioid use disorder have a 13-fold greater risk for suicide than those in the general population.
- SPIRIT addresses the intersection of substance use and suicidality

Baseline descriptive data: High rates of attempt by overdose



Comorbidity with substance use

Baseline descriptive data: Substances involved in overdose suicide attempts



Interplay of substance use and suicidality

Functional associations between substance use and suicide ideation and behavior that we've seen in SPIRIT

- Substance use as suicide attempt
  - Using to get high every day, but also with some non-zero intent to die
  - Collecting drugs as a preparatory behavior
  - B/c the person uses, substances are an ever present lethal means when SI arises
- Substance use without caring if they live or die
- Substance use to get high, then in an altered state of mind, SI increases and/or inhibitions lower to make an attempt
- Substance use with the goal of reducing fear of making an attempt
- Addiction and perceived inability to overcome it as a reason for suicide

Treatment received after an overdose suicide attempt (all follow-ups)

For your most recent non-accidental overdose, did you receive any treatment (Narcan, ED, detox, medical treatment, etc.)? Why or why not?

- Yes (40/197 = 20%)
- No (157/197 = **80%**)
  - Some participants saw it as not that big of a deal
    - "Didn't bother, don't want to be in 'cuckoo hospital'"
    - When he woke up he felt fine and felt like he didn't need it (n = 4)
    - He didn't care and just didn't want to go
    - "He didn't care. He thought if he laid down it would just go away. He didn't need the hospital."
    - "**Didn't see it as an emergency that needed that kind of help**."
  - Some participants don't like hospitals
    - He doesn't like going to the hospital.
  - Some are embarrassed and don't want to deal with people or the attention
    - Embarrassed, doesn't like hospitals, tries to overcome what he's going through on his own
    - "Wasn't thinking straight and didn't want the attention or anyone to be notified."
    - Pt "has psychosis and feels uncomfortable around people. He didn't want to talk to people and answer questions."
  - Some don't seek treatment b/c of legal involvement
    - "You can get in trouble – you can't tell people or they will make you feel punished in prison."
    - "Didn't really have a choice - came to jail"
  - "Made an outpatient med adjustment appointment instead
  - "I was on the run – getting high." "Felt rebellious."

Disclosing intentional nature of overdose

If you did receive treatment for your most recent non-accidental overdose, did you tell the person treating you that you took the substances with some intent to die? Why or why not?

- Yes: 54%
  - "Mother made me tell the truth."
  - "**They asked** so he told them. He figured 'what the hell.'"
  - "I realized I was way too depressed."
  - Pt "wanted to be honest and reach out for help."
  - "I didn't want to continue telling lies."
  - "I didn't want to die."
  - "They have a history of me there in the hospital, in terms of my mental health record."
- No: 46%
  - "I was scared and didn't want to tell them what happened."
  - Pt was hallucinating. **Providers didn't ask** and he wanted to get treated for his scabies before being treated for his suicide ideation.
  - Pt "just wanted to get out of the hospital."
  - Pt did not want to go to the psychiatric hospital (n = 2)
  - Pt was unconscious (n = 2)
  - After pt came down from the high he was feeling different and not suicidal anymore so he decided not to tell them.
  - Pt "was embarrassed."

Saving lives through implementation science

- Evidence-based suicide risk screening measures exist (e.g., C-SSRS)
- Evidence-based brief suicide prevention interventions exist
- Electronic health records (EHRs) exist
- Methods for cross-walking booking data and community mental health EHRs are not outside our technical capability
- They are not being used in most justice and many related community mental health center settings (resources & capacity problem, not motivation problem)

Implementation target: public opinion

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Embracing the SPIRIT of reducing suicide

Recent News

Jail-based suicide prevention study
September 21, 2015

NY Expands Psychosis Treatment Program
August 26, 2015

Register for upcoming mental health disparities webinar
August 12, 2015

Attention game helps curb combat vets' PTSD
July 24, 2015

NIH Co-Funds Autism Biomarker Project
July 16, 2015

News by Year

2015 2014 2013 2012 2011

NIMH and NIJ Collaborate on justice system study

September 21, 2015 • *Science Update*

NIMH, the NIH Office of Behavioral and Social Sciences Research, and the National Institute of Justice (NIJ) have announced a significant collaboration on a new 4-year, $6.8 million study called Suicide Prevention for at-Risk Individuals in Transition or "SPIRIT." The study will address a critical gap in evidence-based suicide prevention and focus on the high-risk individuals who are transitioning from jail to community. The study is NIMH's largest major investment in suicide prevention in the justice system.

Jennifer E. Johnson, Ph.D., C. S. Mott Endowed Professor of Public Health, Michigan State University College of Human Medicine, and Lauren M. Weinstock, Ph.D., Associate Professor of Psychiatry and Human Behavior (Research) at Brown University and Clinical Psychologist at Butler Hospital are co-principal investigators on the study.

With nearly 12 million admissions per year and short stays, US jails serve as a catchment area for at-risk individuals at a time of high life stress and high suicide risk, providing an important opportunity for suicide prevention intervention. In fact, about 10 percent of all those who die by suicide are estimated to have had some type of recent

Contact(s)

Michaelle Scanlon
NIMH Press Office
301-443-4536
NIMHpress@nih.gov

More Science News about:

- Basic Research
- Research Funding
- Mental Health Services Research
- NIMH
- Prevention
- Suicide Prevention
- Treatments

Contact the Press Office

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- NIMHpress@nih.gov

Implementation target: cost-efficient training

- First large trial of any treatment for major depression in an incarcerated population

American Psychological Association

Journal of Consulting and Clinical Psychology

0022-006X/19/$12.00

http://dx.doi.org/10.1037/ccp0000379

Randomized Cost-Effectiveness Trial of Group Interpersonal Psychotherapy (IPT) for Prisoners With Major Depression

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Ted R. Miller
Pacific Institute for Research and Evaluation, Calverton, Maryland, and Curtin University

Caron Zlotnick
Butler Hospital, Providence, Rhode Island; Brown University; and University of Cape Town

Louis A. Cerbo
Rhode Island Department of Corrections, Cranston, Rhode Island

Joel T. Andrade
MHM Services, Inc., Westborough, Massachusetts

Jessica Nargiso
Massachusetts General Hospital, Boston, Massachusetts

Joseph Bonner
Michigan State University

Shannon Wiltsey-Stirman
National Center for PTSD, Menlo Park, California

Objective: This study tested the effectiveness and cost-effectiveness of interpersonal psychotherapy (IPT) for major depressive disorder (MDD) among prisoners. It is the first fully powered randomized trial of any treatment (pharmacological or psychosocial) targeting MDD among incarcerated individuals. ***Method:*** One hundred eighty-one male (n = 117) and female (n = 64) prisoners from prison facilities in 2 states were randomized to group IPT (delivered by master's-level and nonspecialist prison counselors) for MDD plus prison treatment as usual (TAU) or to TAU alone. Participants' average age was 39 (range = 20–61); 20% were African American and 19% were Hispanic. Outcomes assessed at posttreatment and 3-month follow-up included depressive symptoms (primary; assessed using the Hamilton Rating Scale for Depression), suicidality (assessed with the Beck Scale for Suicide Ideation and Beck Hopelessness Scale), in-prison functioning (i.e., enrollment in correctional programs; discipline reports; aggression/victimization; and social support), remission from MDD, and posttraumatic stress disorder symptoms. ***Results:*** IPT reduced depressive

Implementation target: Better policies

The justice system is one of the U.S.'s largest public health systems

- Fund and staff it accordingly
- Reduce incarceration rates (highest in the world) so individuals can be treated in community health systems
- Increase funding for community mental health centers and public substance use treatment systems (fewer people fall through the cracks, become manic/psychotic, get picked up by police)
- Smooth care linkages between jail and community

Implementation target: Awareness

Understand some basics of how the system works

- Jail vs. prison
- How lack of resources affects people leaving prison
- Why jails are even harder (less resources, less time)
- City lock-up
- Medication dysregulation, no service linkage or coordination of services (b/c few resources)

Implementation target: Access

Address barrier of "we don't want *those* patients…"

- If you have a clinic, don't turn away justice-involved clients
- Consider peer navigators or other justice/re-entry focused treatment programs
- Help policy-makers find ways to create incentives (rather than disincentives) for treating patients who have come into contact with the justice system
- Reduce barriers to medication-assisted addiction treatment (e.g., methadone, suboxone, naloxone) access

Implementation target: knowing the evidence

Know and follow research evidence

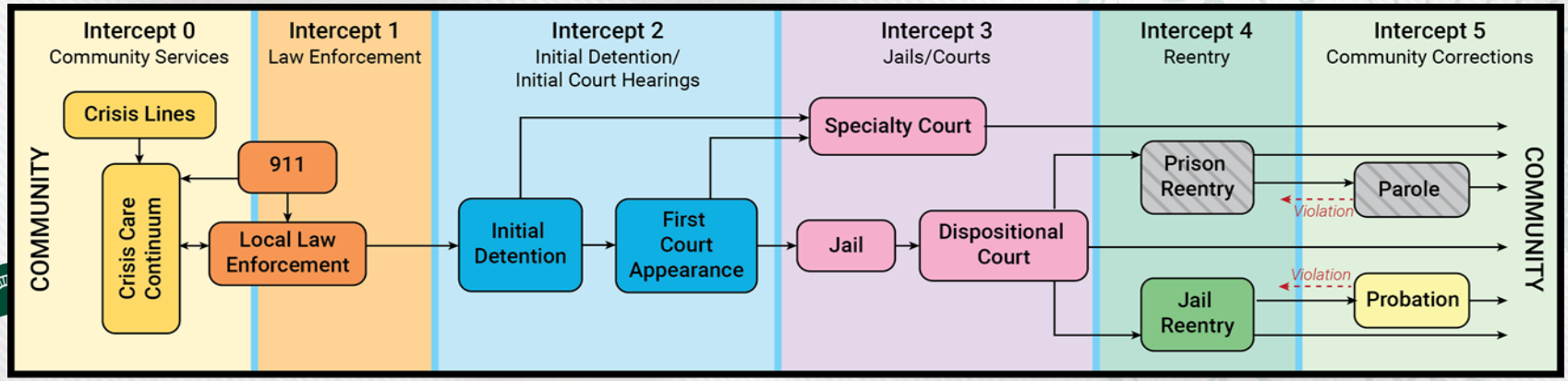
- Community substance use treatment gets the same or better results and is less costly than incarceration (e.g., Basu 2008; Cartwright 2000; Cowell 2004; see also McCollister 2003; 2004)
- Mandated substance use treatment is effective
- Many justice-involved clients will need medication maintenance treatment (i.e., methadone, suboxone) to maintain opiate recovery in the community

Suicide prevention take-homes

- Definition of a suicide attempt is any action taken with non-zero intent to die
- Ask directly if an overdose or other dangerous event occurred with non-zero intent to die
- Understand that most suicide attempts are impulsive (70% within an hour of the thought; 50% within 5 minutes); reduce access to lethal means
- It doesn't matter if it was ambivalent or "for attention" – the person can still die.
- Brief suicide prevention interventions such as SPI are effective in community settings

Overall take-homes

1. Many people at high risk of suicide are served in low-resource or non-treatment systems (including CJ, substance use programs, etc.)
2. For the most part, these systems aren't using evidence-based suicide risk screening, evidence-based suicide prevention interventions, or adequate data linkage/patient tracking systems
3. Motivation of these systems isn't the problem; capacity is the problem
4. We can help. This may be the fastest way to save lives.



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Contact me. I would love to work with you to solve these issues